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|-------------------------------|-----------------|--------------------|--|
| <b>Notice of Allowability</b> | Application No. | Applicant(s)       |  |
|                               | 10/699,450      | BHAGAVATULA ET AL. |  |
|                               | Examiner        | Art Unit           |  |
|                               | Omar Rojas      | 2874               |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**  
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the telephone interview conducted on April 13, 2006.
2. ☒ The allowed claim(s) is/are 1,4-17 and 22.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

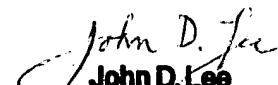
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br/>Paper No./Mail Date _____</li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br/>of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>0406</u>.</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other _____</li> </ol> |
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**John D. Lee**  
 Primary Examiner

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Adenike A. Adebisi on April 13, 2006.

The application has been amended as follows:

#### IN THE CLAIMS:

Claims 1, 4, and 5 are amended as follows:

- In claim 1, line 4, replace "formed at" with –affixed to–.
- In claim 4, insert at the end of the claim –; wherein a mode field diameter of the spot is less than 10  $\mu\text{m}$ –.
- In claim 5, insert at the end of the claim –; wherein a mode field diameter of the spot is less than 10  $\mu\text{m}$ –.

***Reasons for Allowance***

The following is an examiner's statement of reasons for allowance:

The previous reasons for allowance are incorporated herein and the following additional comments are submitted with respect to claims 1, 4, and 5 in view of U.S Patent No. 5,638,471 to Semo et al. ("Semo").

With respect to claim 1, the claim as currently amended is considered patentable over Semo. In particular, claim 1 now recites that the refractive lens having a hyperbolic shape is *affixed to* a second end of the graded-index lens. In contrast, the Semo patent shows (Fig. 11) that the hyperbolic shaped lens 20 is affixed to a polarization maintaining fiber 10 rather than the graded-index lens 50. Furthermore, there is no suggestion in Semo to modify the hyperbolic lens 20 so as to be affixed to the graded-index lens 50. Thus, claim 1 and its dependent claims are considered patentable over Semo.

With respect to independent claim 4, the claim as currently amended is also considered patentable over Semo. In particular, claim 4 now recites that a mode field diameter of the diffraction-limited spot is less than 10  $\mu\text{m}$ . In contrast, Semo is silent as to the mode field diameter of the diffraction limited spot. Semo also appears to lack sufficient detail to suggest that a mode field diameter of less than 10  $\mu\text{m}$  is inherently present. Furthermore, it is the position of this Examiner that it would not have been obvious to modify Semo to achieve the invention of claim 4 absent the Applicant's own teachings. Thus, claim 4 is considered patentable over Semo.

With respect to independent claim 5, the claim as currently amended is also considered patentable over Semo. In particular, claim 5 now recites that a mode field diameter of the

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diffraction-limited spot is less than 10  $\mu\text{m}$ . In contrast, Semo is silent as to the mode field diameter of the diffraction limited spot. Semo also appears to lack sufficient detail to suggest that a mode field diameter of less than 10  $\mu\text{m}$  is inherently present. Furthermore, it is the position of this Examiner that it would not have been obvious to modify Semo to achieve the invention of claim 5 absent the Applicant's own teachings. Thus, claim 5 is considered patentable over Semo.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

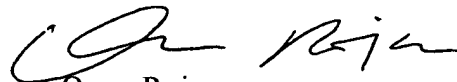
#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (7:00AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

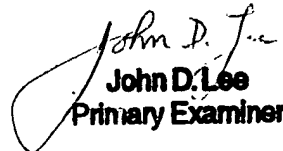
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Omar Rojas  
Patent Examiner  
Art Unit 2874

or  
April 26, 2006



**John D. Lee**  
Primary Examiner